We claim:

1. In a mesh network of a plurality of nodes providing wireless network access to at least one wireless end user device, a gateway node for providing wireless end user device tracking and data traffic services to said mesh network, the gateway node comprising:

- a gateway communications module for receiving data traffic from another network external to said mesh network and for relaying data traffic to said another network;

- at least one backhaul communications module for sending and receiving data traffic to and from said mesh network;

- a control module for controlling and routing data traffic between said mesh network and said another network;

- a location table for recording a location of the or each wireless end use device, said location being determined by which node provides wireless coverage to said wireless end user device, said location being denoted by an address of said node providing coverage;

- an association table for recording which node the or each wireless end user device is associated with, each wireless end user device being associated with only one node at any one time,

wherein

-said control module routes said data traffic from said another network to the or each wireless end user device based on entries in said location table and said association table.

2. A gateway node according to claim 1 wherein said location table is regularly updated based on update data received by said gateway node from said mesh network.

3. A gateway node according to claim 2 wherein said update data is received from nodes in said mesh network.

4. A gateway node according to claim 3 wherein said update data from at least one node comprises a listing of addresses of wireless end user devices being provided wireless coverage by the or each node.

5. A gateway node according to claim 3 wherein said update data is received from another gateway node.

6. A gateway according to claim 1 wherein said control module repackages data packets destined for a roaming destination wireless end user device to provide said data packets with a new destination address based on which node is providing wireless coverage to said roaming destination wireless end user device, said roaming destination wireless end user device being a wireless end user device being proceed coverage by a node other than a node associated with said wireless end user device.

7. A gateway node according to claim 2 wherein said gateway node notifies each node in the mesh network about the location of wireless end user devices associated with said node.

8. A gateway node according to claim 7 wherein said gateway node notifies other gateway nodes in the mesh network of changes in said tables.

9. A mesh network for providing wireless access to a plurality of roaming wireless end user devices said mesh network comprising:

- at least one gateway node for relaying data traffic between another network external to said mesh network and said mesh network;

- a plurality of nodes interconnected in a mesh configuration, each node being in communication with at least one node being in communication with said at least one

gateway node;

- at least one of said plurality of nodes being in wireless communication with at least one of said wireless end user devices wireless access,

wherein

- each of said wireless end user devices is associated with a single node;
- the or each of said at least one gateway node has a record of a location of each of said wireless end user devices in said mesh network, said location of each wireless end user device being denoted by an address of a node providing wireless access to said wireless end user device;
- the or each of said at least one gateway node routes data traffic destined for a roaming wireless end user device to a node providing wireless access to said roaming wireless end user device based on said record of said location of said roaming wireless end user device , said roaming wireless end user device being a wireless end user device being provided wireless access by a node other than a node associated with said roaming wireless end user device.

10. A mesh network according to claim 9 wherein the or each of said at least one gateway node has a record of which wireless end user device is associated with which node.

11. A mesh network according to claim 9 wherein said plurality of nodes relays data traffic between each other to deliver said traffic to a destination node.

12. A mesh network according to claim 9 wherein at least two nodes in said network communicate using a wireless point to point link.

13. A mesh network according to claim 9 wherein each node is periodically notified by at least one of said at least one gateway node of locations of any roaming wireless end user devices associated with said node.

14. A mesh network according to claim 13 wherein data traffic destined for a particular roaming wireless end user device is buffered by an associated node associated with said particular roaming wireless end user device until said associated node is notified of an address of a node providing wireless access to said roaming wireless end user device.

15. A mesh network according to claim 9 wherein data traffic between two roaming wireless end user devices is exchanged between nodes providing wireless access to said two roaming wireless end user devices after initial data traffic is exchanged between nodes associated with said two roaming wireless end user devices.

16. A method of routing data traffic destined for a roaming wireless end user device in a mesh network having a plurality of nodes providing wireless access to a plurality of wireless end user devices, said mesh network having at least one gateway node for providing data traffic services, each of said wireless end user devices being associated with one of said nodes and said roaming wireless end user device being a wireless end user device being provided wireless access by a node said wireless end user device is not associated with, the method comprising:

a) receiving data traffic destined for a roaming wireless end user device at a gateway node;

b) checking a record in said gateway node for a location of said roaming wireless end user device, said location being an indication of which node in said network is providing wireless access to said roaming wireless end user device;

c) repackaging said data traffic for routing to said roaming wireless end user device such that repackaged data traffic is now destined for a node providing wireless access to said roaming wireless end user device; and

d) sending said repackaged data traffic to said node providing wireless access to said roaming wireless end user device.

17. A method according to claim 16 further including the steps of

- in the event said record does not contain a location for said roaming wireless end user device, sending said data traffic to a node associated with said roaming wireless end user device for buffering.

18. A method according to claim 17 further including the step of

- receiving an update on a location of said roaming wireless end user device from a node providing wireless access to said roaming wireless end user device;

- updating said record;

- transmitting said location of said roaming wireless end user device to said node associated with said roaming wireless end user device;

- forwarding buffered data traffic from said node associated with said roaming wireless end user device to said node denoted by said location.

19. A method according to claim 18 wherein said step of forwarding comprises repackaging said data traffic to create a data package such that said data package is now destined for said node providing wireless access to said roaming wireless end user device.

20. A method of routing data traffic destined for a roaming wireless end user device in a mesh network having a plurality of nodes providing wireless access to a plurality of wireless end user devices, said mesh network having at least one gateway node for providing data traffic services, each of said wireless end user devices being associated with one of said nodes and said roaming wireless end user device being a wireless end user device being provided wireless access by a node said wireless end user device is not associated with, the method comprising:

a) receiving data traffic destined for a roaming wireless end user device at an associated node associated with said roaming wireless end user device, said data traffic originating from a wireless end user device;

b) determining a location of said roaming wireless end user device based on data received by said associated node from a gateway node;

c) repackaging said data traffic into a data package destined for a node denoted by said location;

d) sending said data package to said node denoted by said location.

21. A method according to claim 20 further including the step of:

- in the event said location cannot be determined, buffering said data traffic until said location is determined by receiving new data from said gateway node;

- once said location is determined, executing steps c) and d).

22. A method of routing data traffic destined for a roaming wireless end user device in a mesh network having a plurality of nodes providing wireless access to a plurality of wireless end user devices, said mesh network having at least one gateway node for providing data traffic services, each of said wireless end user devices being associated with one of said nodes and said roaming wireless end user device being a wireless end user device being provided wireless access by a node said wireless end user device is not associated with, the method comprising:

a) receiving a data package addressed to a destination node providing wireless access to a roaming wireless end user device at said destination node;

b) unpackaging said data package and transmitting said contents to said roaming wireless end user device;

c) in the event said data package is from a node associated with said roaming wireless end user device, receiving subsequent data packages from a gateway node, said data packages containing data traffic destined for said roaming wireless end user device; and

d) in the event said data package is from a source node which is not associated with said roaming wireless end user device, establishing a connection between said source node and said destination node for subsequent data traffic destined for said roaming wireless end user device.

23. A method according to claim 18 further including the step of transmitting said

location of said roaming wireless end user device to a node which last provided wireless access to said roaming wireless access to said roaming wireless end user device.

24. A gateway node according to claim 2 wherein said location table is updated by said update data in the event a wireless end user device changes location such that a node providing wireless coverage to said wireless end user device changes.